

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A continuous glucose monitoring system, comprising:
 - a sensor configured to detect one or more glucose levels;
 - a sensor control unit transmitter operatively coupled to the sensor, the sensor control unit transmitter configured to receive signals corresponding to the detected one or more glucose levels from the sensor, the sensor control unit including electronics to convert the received signals to a predetermined format, the sensor control unit transmitter further configured to transmit the converted signals corresponding to the detected one or more glucose levels; and
 - a receiver operatively coupled to the sensor control unit transmitter configured to receive transmitted signals corresponding to the detected one or more glucose levels;
 - ~~wherein the transmitter is configured to transmit three data points per minute to the receiver, said three data points corresponding to the detected one or more glucose levels.~~
 - wherein the electronics include logic to compare consecutive signals from the sensor to determine if they differ by more than a threshold level, and if the difference is greater than the threshold level for one signal or over a period of time or for a predetermined number of signals within a period of time, the electronics is configured to generate an output notification.
2. (Currently Amended) The system of claim 1 wherein the receiver is operatively coupled to the sensor control unit transmitter via an RF communication link.
3. (Currently Amended) The system of claim 1 wherein the sensor control unit transmitter is configured to encode the detected one or more glucose levels received from the sensor to generate encoded signals, the sensor control unit transmitter further configured to transmit the encoded signals to the receiver.

4. (Currently Amended) The system of claim 3 wherein the receiver is configured to decode the encoded signals received from the sensor control unit transmitter.
5. (Currently Amended) The system of claim 3 wherein the sensor control unit transmitter is configured to transmit the encoded signals to the receiver at a transmission rate of one data point per minute.
6. (Cancelled)
7. (Currently Amended) The system of claim 1 wherein each transmission from the sensor control unit to the receiver includes said three data points include a current data point and two a previous data points.
8. (Currently Amended) The system of claim 7 wherein the current data point corresponds to a current glucose level, and wherein the two previous data points include two consecutive glucose levels, said one of the two consecutive glucose levels corresponds to the glucose level immediately preceding the current glucose level.
9. (Original) The system of claim 1 wherein the receiver includes an output unit for outputting the received transmitted signals corresponding to one or more glucose levels.
10. (Original) The system of claim 9 wherein the output unit includes a display unit for displaying data corresponding to said one or more glucose levels.
11. (Original) The system of claim 10 wherein the display unit includes one of a LCD display, a cathode ray tube display, and a plasma display.

12. (Original) The system of claim 10 wherein the displayed data includes one or more of an alphanumeric representation corresponding to the one or more glucose levels, a graphical representation of the one or more glucose levels, and a three-dimensional representation of the one or more glucose levels.

13. (Original) The system of claim 10 wherein the display unit is configured to display the data corresponding to the one or more glucose levels substantially in real time.

14. (Original) The system of claim 9 wherein the output unit includes a speaker for outputting an audio signal corresponding to said one or more glucose levels.

15. (Currently Amended) The system of claim 1 wherein the receiver is configured to store an identification information corresponding to the sensor control unit transmitter.

16. (Currently Amended) The system of claim 15 wherein the receiver is further configured to perform a time hopping procedure for synchronizing with the sensor control unit transmitter.

17. (Currently Amended) The system of claim 1 wherein the receiver is configured to synchronize with the sensor control unit transmitter based on the signal strength detected from the sensor control unit transmitter.

18. (Currently Amended) The system of claim 17 wherein the detected signal strength exceeds a preset threshold level.

19. (Currently Amended) The system of claim 1 wherein the transmitter is encased in a substantially water tight housing.

20. (Currently Amended) The system of claim 1 wherein the sensor control unit transmitter includes a disable switch for temporarily disabling the transmission of the signals.

21. (Currently Amended) A continuous glucose monitoring system, comprising:
a sensor configured to detect one or more glucose levels;
a sensor control unit transmitter operatively coupled to the sensor, the sensor control unit transmitter configured to receive signals corresponding to the detected one or more glucose levels from the sensor, the sensor control unit including electronics to convert the received signals to a predetermined format, the sensor control unit transmitter further configured to transmit signals corresponding to the detected one or more glucose levels; and
a receiver operatively coupled to the sensor control unit transmitter configured to receive transmitted signals corresponding to the detected one or more glucose levels;
wherein the electronics include logic to compare consecutive signals from the sensor to determine if they differ by more than a threshold level, and if the difference is greater than the threshold level for one signal or over a period of time or for a predetermined number of signals within a period of time, the electronics is configured to generate an output notification; and further
wherein the sensor control unit transmitter is configured to transmit a current data point and at least one previous data point, said current data point and said at least one previous data point corresponding to the detected one or more glucose levels.

22. (Currently Amended) The system of claim 21 wherein the receiver is operatively coupled to the sensor control unit transmitter via an RF communication link.

23. (Currently Amended) The system of claim 21 wherein the transmitter is configured to encode the detected one or more glucose levels received from the sensor

to generate encoded signals, the sensor control unit transmitter further configured to transmit the encoded signals to the receiver.

24. (Currently Amended) The system of claim 23 wherein the receiver is configured to decode the encoded signals received from the sensor control unit transmitter.

25. (Currently Amended) The system of claim 23 wherein the sensor control unit transmitter is configured to transmit the encoded signals to the receiver at a transmission rate of one data point per minute.

26. (Currently Amended) The system of claim 21 wherein the sensor control unit transmitter is configured to transmit said current data point and said at least one previous data points in a single transmission per minute to the receiver.

27. (Original) The system of claim 21 wherein the current data point corresponds to a current glucose level, and wherein said at least one previous data point includes at least two previous data points corresponding respectively to at least two consecutive glucose levels, said one of the at least two consecutive glucose levels immediately preceding the current glucose level.

28. (Original) The system of claim 21 wherein the receiver includes an output unit for outputting the received transmitted signals corresponding to one or more glucose levels.

29. (Original) The system of claim 28 wherein the output unit includes a display unit for displaying data corresponding to said one or more glucose levels.

30. (Original) The system of claim 29 wherein the display unit includes one of a LCD display, a cathode ray tube display, and a plasma display.

31. (Original) The system of claim 29 wherein the displayed data includes one or more of an alphanumeric representation corresponding to the one or more glucose levels, a graphical representation of the one or more glucose levels, and a three-dimensional representation of the one or more glucose levels.
32. (Original) The system of claim 29 wherein the display unit is configured to display the data corresponding to the one or more glucose levels substantially in real time.
33. (Original) The system of claim 28 wherein the output unit includes a speaker for outputting an audio signal corresponding to said one or more glucose levels.
34. (Currently Amended) The system of claim 21 wherein the receiver is configured to store an identification information corresponding to the sensor control unit transmitter.
35. (Currently Amended) The system of claim 34 wherein the receiver is further configured to perform a time hopping procedure for synchronizing with the sensor control unit transmitter.
36. (Currently Amended) The system of claim 21 wherein the receiver is configured to synchronize with the sensor control unit transmitter based on the signal strength detected from the sensor control unit transmitter.
37. (Original) The system of claim 36 wherein the detected signal strength exceeds a preset threshold level.
38. (Currently Amended) The system of claim 1 wherein the sensor control unit transmitter is encased in a substantially water tight housing.

39. (Currently Amended) The system of claim 1 wherein the sensor control unit transmitter includes a disable switch for temporarily disabling the transmission of the signals.

40-53. (Cancelled)

54. (New) The system of claim 1 wherein the electronics of the sensor control unit to convert the received signals to the predetermined format includes a current to frequency conversion unit.

55. (New) The system of claim 1 wherein the output notification includes an alert to replace the sensor.

56. (New) The system of claim 21 wherein the electronics of the sensor control unit to convert the received signals to the predetermined format includes a current to frequency conversion unit.

57. (New) The system of claim 21 wherein the output notification includes an alert to replace the sensor.